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COSTS and RETURNS



**Commercial
Cotton
Farms**

1967

FARM COSTS AND RETURNS STUDIES

This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches by type and size in some of the important farming regions of the United States. The study is conducted under the general supervision of Wylie D. Goodsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas covered in the study.

The 1967 costs and returns studies have been conducted on the following:

- Dairy Farms, Northeast and Midwest
- Corn Belt Farms
- Egg-Producing Farms, New Jersey
- Broiler Farms, Maine, Delmarva, and Georgia
- Cotton Farms
- Tobacco Farms, Coastal Plain, North Carolina
- Tobacco-Livestock Farms, Bluegrass Area, Kentucky and Pennyroyal Area, Kentucky-Tennessee
- Wheat Farms, Plains and Pacific Northwest
- Western Livestock Ranches

Summary statistics for all types of farms in the study are presented in a report, revised annually. The latest such report was published in 1967 and is titled: "Farm Costs and Returns, Commercial Farms, by Type, Size, and Location," Agriculture Information Bulletin, No. 230, Revised 1967.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

COSTS AND RETURNS

COMMERCIAL COTTON FARMS, 1967

J. Albert Evans and Dorothy Nolan¹

SUMMARY

This report presents information on costs and returns for commercial cotton farms in three important cotton-producing areas of the United States (figs. 1 and 2). Net farm incomes for 1967 are compared with those for 1966 and the 1961-65 average:

	Average			Percentage change	
	1961-65	1966	1967	1961-65 to 1967	1966 to 1967
Nonirrigated:					
Mississippi Delta	\$33,738	\$37,141	\$37,761	12	2
High Plains, Tex.	8,962	14,107	15,885	77	13
Irrigated:					
High Plains, Tex.	17,187	18,130	22,140	29	22
San Joaquin Valley, Calif..	28,968	25,243	31,389	8	24

In 1967, net farm incomes were the highest on record for both irrigated and nonirrigated cotton farms in the High Plains of Texas. They were the second highest on record for large-scale Mississippi Delta cotton farms and third highest on medium-sized cotton-general crop farms in the San Joaquin Valley of California. The increases in net farm incomes, compared with 1966, ranged from an average of 2 percent on Mississippi Delta cotton farms to 24 percent in the San Joaquin Valley.

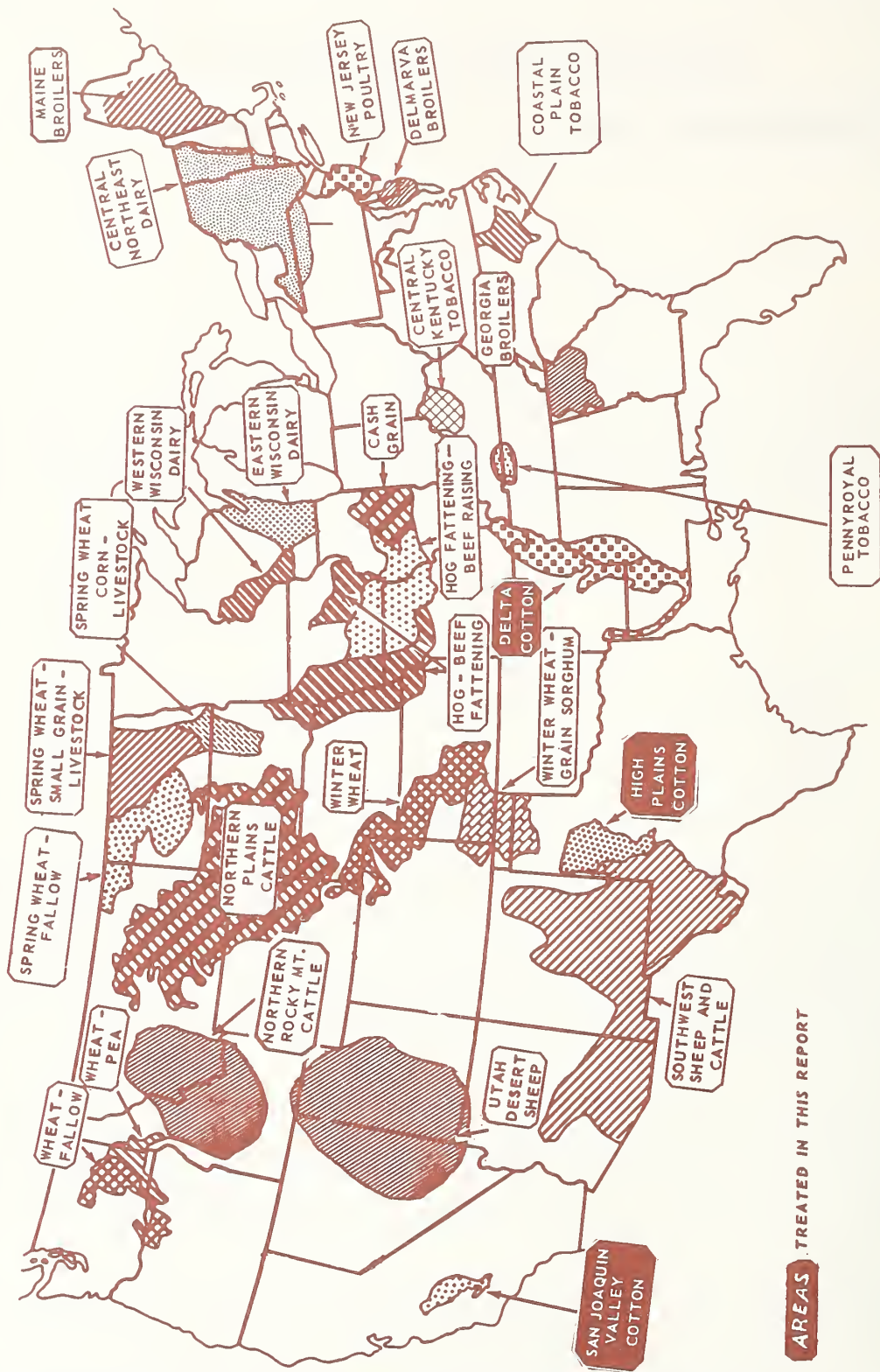
Substantially higher prices for cotton lint and larger Government payments per farm were the major reasons net farm incomes increased despite greater outlays for production inputs and lower production per farm. Cotton acreages were reduced and yields were lower than in 1966, reflecting increased participation in the Upland Cotton Program and unfavorable growing conditions.

The Government's 1966 and 1967 Upland Cotton Programs² were basically the same and were designed, in part, to limit cotton production and, therefore, the surplus of stored cotton. This aim was accomplished

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²For a more detailed description of the 1966 Upland Cotton Program, refer to "Costs and Returns, Commercial Cotton Farms, 1966," FCR-53, September 1967.

LOCATION OF TYPES OF FARMS STUDIED



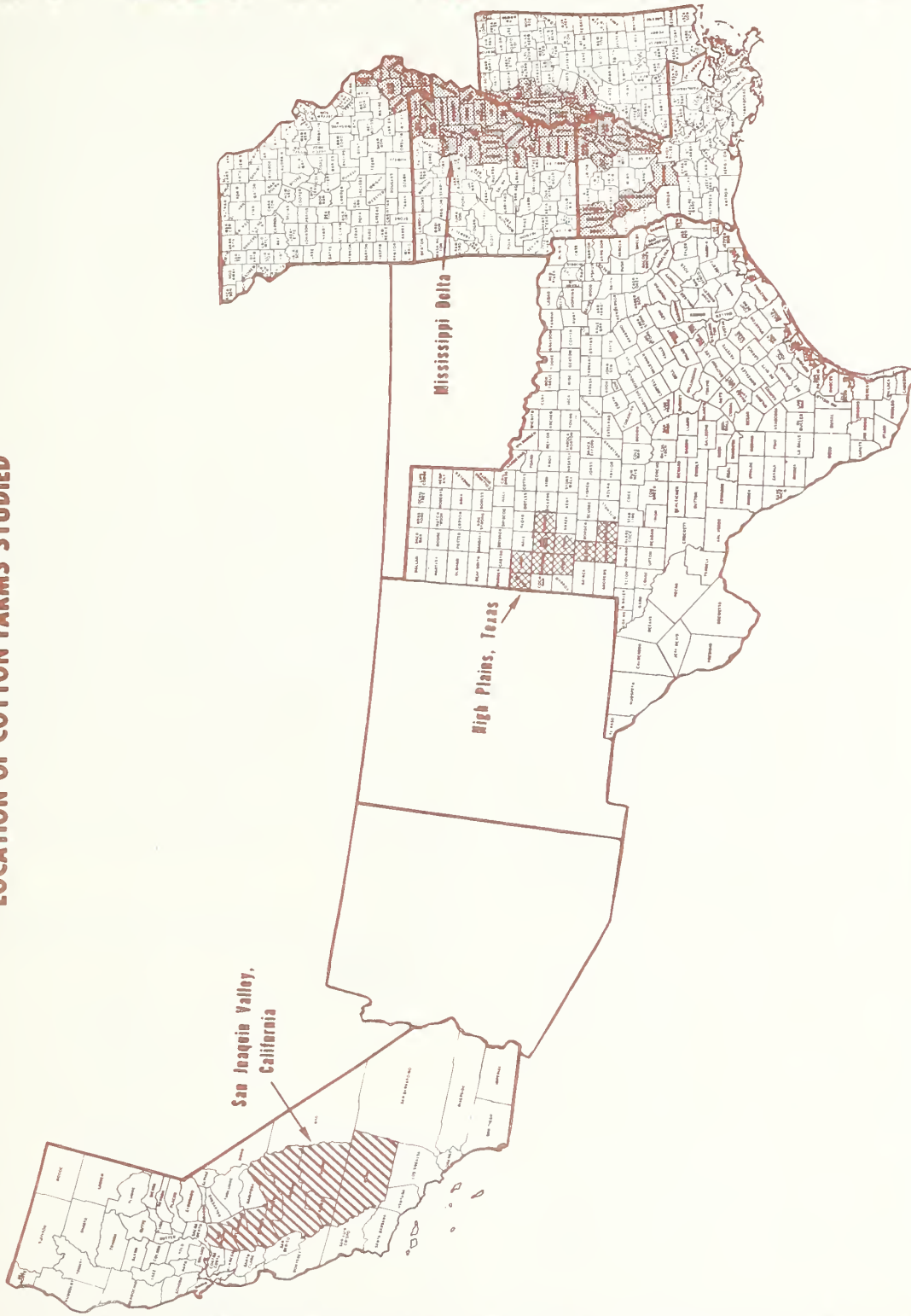
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NEG. ERS 133 - 68 (2)

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Figure 1

LOCATION OF COTTON FARMS STUDIED



U. S. DEPARTMENT OF AGRICULTURE

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Figure 2

by paying participating growers to underplant their allotted acreage by 12-1/2 percent, 25 percent, or 35 percent in 1966 and by any amount between 12-1/2 percent and 35 percent in 1967. Except in far-western States, practically all farmers reduced their cotton acreages by the maximum 35 percent in 1966 and 1967. Diversion payments in 1967 were 10.78 cents per pound of projected yield per acre, times the acreage diverted--compared with 10.50 cents per pound in 1966. However, the 1967 price-support payment rate on planted cotton acreage was increased from 9.42 cents to 11.53 cents per pound of projected yield on a maximum of 65 percent of the farm's effective acreage allotment.

U.S. cotton acreage planted in 1967 was 8 percent less than in 1966 and 33 percent below 1965. Harvested cotton acreage was 15 percent under 1966 and 41 percent less than 1965. Cotton production was down 20 percent from 1966 and was 49 percent below the 1965 level. The 1967 cotton crop turned out to be much smaller than anticipated due to the extremely unfavorable growing season in practically all production areas.

The planting season was the worst on record over much of the producing belt due to extremely dry or cool, wet weather. In the High Plains, dry soils prevented planting nonirrigated cotton acreage until after mid-June. About 15 percent of the U.S. cotton crop was abandoned--almost double the high abandonment rate of 1966. Because of the unfavorable planting season, the cotton crop developed about 3 weeks later than normal in most areas. In the Delta, heavy rains during July and August caused weedy fields and rank plant growth, but

fruiting was slow and boll weevil infestation reached record proportions. In California, extremely hot weather during August and September caused heavy shedding of early bolls, limited setting of late bolls, and increased insect infestations. Early November freezes reduced expected cotton yields in northern Arkansas and Mississippi and in the Missouri portion of the Delta. However, compared with 1966, Texas and Louisiana cotton yields were much better than for other major cotton-producing States.

In the fall of 1967, as it became apparent to cotton buyers that shortages of the longer staple length grades of cotton would occur, prices were bid up substantially. With the widening price spread between longer and shorter staple length cottons (such as are grown in the Texas High Plains), demand for the short-staple cottons increased and prices rose for these also. Consequently, 1967 prices received by farmers for cotton lint averaged higher than in 1966 by about 3-1/2 cents in the High Plains and around 8 cents in the Delta and the San Joaquin Valley (table 1).

Table 1.--Average prices received by farmers per pound of cotton lint, selected areas, 1966 and 1967¹

Area	1966	1967
	--- Cents ---	
Mississippi Delta	22.4	30.1
High Plains, Tex.	18.0	21.5
San Joaquin Valley, Calif.	28.0	36.2

¹Excludes price-support payment on domestic allotment poundage, amounting to 9.42 cents per pound in 1966 and 11.53 cents per pound in 1967, earned by participants in the Upland Cotton Program.

Cotton growers continued to substitute capital for labor in 1967--at an accelerating rate--because of rising prices for labor. Legislation effective February 1, 1967, established a minimum wage of \$1 per hour for covered workers. Therefore, in the Delta, for example, more use was made of six- and eight-row farm machinery for land preparation, planting, and cultivation. Also, more extensive use was made of chemicals to control weeds.

Mississippi Delta

The Mississippi Delta, as defined for this report, includes a total of 53 counties--19 in east Arkansas; 15 in upper Louisiana, mainly the eastern portion; 11 in northwest Mississippi; and 8 in southeast Missouri. Table 2 shows the percentage distribution of all commercial farms within the selected areas, according to types (excluding miscellaneous

and unclassified farms), as published by the U.S. Census of Agriculture for 1959 and 1964. To be classified as a particular type, a farm had to have sales of a particular product or group of products amounting in value to 50 percent or more of the total value of all farm products sold during the year. Income from sales of cotton and cottonseed had to be at least half the income from sales of all agricultural products before a given farm was typed as a cotton farm. In the Delta, cotton farms declined from 75 percent of all commercial farms in 1959 to 63 percent in 1964. Cash grain farms, which comprised 11 percent of all commercial farms in 1959, increased to 20 percent in 1964.

Calculations based on 1964 Census of Agriculture data reveal that 78 percent of all commercial farms in the Delta grew cotton in 1964.

Table 2.--Percentage distribution of commercial farms by types, selected areas, 1959 and 1964

Type of farm	Mississippi Delta		High Plains, Tex.		San Joaquin Valley, Calif.	
	1959	1964	1959	1964	1959	1964
	-----Percent-----					
Cash grain.....	11	20	2	2	1	2
Cotton.....	75	63	92	89	25	18
Other field crop.....	1	2	--	--	1	1
Vegetable.....	--	--	--	--	1	2
Fruit and nut.....	--	--	--	--	39	45
Poultry.....	1	1	--	1	5	3
Dairy.....	1	1	1	--	11	9
Livestock, other than poultry and dairy.....	6	7	3	4	7	8
Livestock ranches.....	1	1	1	2	4	4
General.....	4	5	1	2	6	8

Source: Census of Agriculture, Bureau of the Census, U.S. Department of Commerce.

Cotton-type farms accounted for 89 percent of the harvested cotton acreage and 91 percent of all commercial cotton produced. In this report, costs and returns estimates for the Delta are based only on cotton-type farms harvesting 300 to 1,400 acres of crops and having 100 to 800 acres of cotton in 1966 or 1967. In 1964, about 12 percent of all commercial cotton-type farms in the Delta were represented within the above ranges, but these farms probably accounted for about half the cotton produced on all commercial farms.

On large cotton farms in the Mississippi Delta, 1967 net farm incomes averaged \$37,760--2 percent above the 1966 level (table 3). Total cash receipts were 2 percent greater, due mainly to increased income from participation in the Cotton Program. This increase more than offset smaller cash receipts from sales of soybeans due to lower prices and yields. Operating expenses were 1 percent higher in 1967.

Farm production on large-scale Delta cotton farms averaged 12

percent below 1966. Acreages of wheat and soybeans were expanded, with a resultant increase in production for these crops, despite lower yields than in 1966. Production of cotton declined 23 percent due to greater diversion under the Upland Cotton Program, more abandonment of planted acreage, and lower yields. The index of crop yields per acre was 8 percent under 1966. Labor was used more efficiently, as reflected by a 6-percent increase in production per hour of man labor. However, considering all production inputs, production per unit of input declined 8 percent.

Total cash expenses on Delta large-scale cotton farms averaged \$41,785--3 percent above 1966. The index of prices paid for all production inputs averaged 7 percent higher. Machinery and hired labor accounted for more than 60 percent of total costs. Outlays for farm machinery rose 5 percent from 1966, but the largest percentage increase was for the chemical group, due largely to the greater use of herbicides. Ginning expenses declined 20 percent because of the drop in cotton production.

HIGH PLAINS, TEX.

The High Plains, as defined for this report, consists of a 10-county area in northwest Texas. Counties included are Bailey, Lamb, Hockley, Lubbock, Crosby, Terry, Lynn, Dawson, Martin, and Howard. Texas is, by a large margin, the No. 1 cotton-producing State in the Nation. The greatest concentration of cotton acreage in Texas is within the High Plains. Including both irrigated and dryland cotton acreage, the High Plains contributed approximately one-fourth of Texas' cotton acreage

in 1966 and at least one-third of the cotton produced. Table 2 reflects the importance of cotton in the area's economy. In 1959 and 1964, about 90 percent of all commercial farms there were typed as cotton farms, according to the U.S. Census of Agriculture classification method. However, the large quantities of sorghum grain and cottonseed by-products give the area a high potential for livestock production, especially on large commercial feedlots.

Table 3.--Organization, production, costs and returns, cotton farms, Mississippi Delta, average 1957-59, annual 1966-67¹

Item	Unit	Average 1957-59	1966	1967 ^{1/}
Land in farm.....	Acre	1,000	1,000	1,000
Cropland harvested.....	do.	602	597	609
Crops harvested:				
Cotton.....	do.	219	174	151
Corn.....	do.	41	9	7
Oats.....	do.	73	10	9
Soybeans.....	do.	236	345	364
Wheat.....	do.	---	42	63
Hay.....	do.	33	17	15
Crop yields per harvested acre:				
Cotton.....	Pound	499	587	520
Corn.....	Bushel	38.5	40.3	51.7
Oats.....	do.	38.1	56.6	57.8
Soybeans.....	do.	26.0	25.0	24.3
Wheat.....	do.	---	35.9	30.7
Hay.....	Ton	1.8	1.8	2.5
Livestock on farm, Jan. 1:				
All cattle.....	Number	81	80	82
All hogs.....	do.	26	8	10
Total farm capital, Jan. 1.....	Dollar	196,760	367,070	382,430
Land and buildings.....	do.	156,670	306,000	317,000
Machinery and equipment.....	do.	31,220	51,240	54,160
Livestock.....	do.	6,830	8,040	9,230
Crops.....	do.	2,040	1,790	2,040
Total labor used.....	Hour	35,310	19,610	16,250
Hired.....	do.	24,340	16,610	13,250
Cropper.....	do.	7,770	0	0
Total cash receipts.....	Dollar	61,252	75,895	77,334
Cotton, lint and seed.....	do.	40,943	28,483	27,330
Other crops.....	do.	14,400	25,421	23,946
Cattle and hogs.....	do.	4,659	4,842	5,203
Other livestock and livestock products.....	do.	111	134	115
Other, including Government payments..	do.	1,139	17,015	20,740
Value of perquisites.....	do.	1,786	1,310	1,378
Change in inventory of crops and livestock.....	do.	-792	273	-111
Gross farm income.....	do.	62,246	77,478	78,601
Total cash expenditures.....	do.	40,195	40,717	41,784
Feed purchased.....	do.	648	1,029	955
Livestock expense.....	do.	338	290	294
Fertilizer and lime.....	do.	2,795	2,579	2,593
Pesticides and other chemicals.....	do.	1,900	2,013	2,438
Other crop expense.....	do.	1,793	1,750	1,956
Ginning.....	do.	3,487	3,636	2,905
Machinery.....	do.	9,572	13,840	14,570
Machine work hired.....	do.	1,506	1,563	1,721
Farm buildings and fences.....	do.	1,118	1,400	1,555
Labor hired.....	do.	2/15,512	10,362	10,372
Taxes.....	do.	1,279	1,980	2,150
Other.....	do.	247	275	275
Inventory adjustment, machinery and buildings.....	do.	1,239	-380	-944
Perquisites for cropper labor.....	do.	569	0	0
Total operating expenses.....	do.	42,003	40,337	40,840
Net farm income.....	do.	20,243	37,141	37,761

^{1/} Preliminary.^{2/} Includes cropper labor.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

According to the 1959 U.S. Census of Agriculture, 53 percent of all cotton farms in the High Plains grew only irrigated cotton (44 percent of all cotton acreage in the High Plains), accounting for 56 percent of all production. In addition, 21 percent of the farmers irrigated only part of their cotton acreage (15 percent of all cotton acreage), accounting for 18 percent of all production. Nonirrigated cotton only (41 percent of all cotton acreage) was produced on 26 percent of the farms, accounting for about 26 percent of all cotton produced. Because 1964 was an extremely dry year in the High Plains, with much non-irrigated cotton being abandoned, 1964 Census of Agriculture data for the above items do not reflect the normal proportions of irrigated and nonirrigated cotton in the area.

Grain sorghum production is highly concentrated on both irrigated and nonirrigated cotton farms in the High Plains. Farmers with more than enough water to irrigate all their cotton often find it profitable to irrigate grain sorghum. Cotton and grain sorghum comprise an extremely high percentage of all land farmed in the High Plains. Water for irrigation is very limited in Dawson, Martin, and Howard Counties, and in parts of Terry, Lynn, and Hockley Counties, but a high proportion of cotton acreage in the remaining counties is irrigated. Water problems are becoming more acute in the High Plains, due to a much faster rate of water use than of well recharge, declining well yields, and the increasing costs associated with irrigation under these conditions.

The average annual rainfall ranges from about 15 to 20 inches in the 10 counties and varies greatly from year to year. These wide fluctuations

around a low average rainfall make dryland farming a risky business.

Length of the growing season also varies widely. The average frost-free period ranges from less than 200 days in the north to about 220 days in the south. A difference of about 90 days has occurred between the shortest and the longest frost-free periods.

Soils in the area are predominantly sandy. Some of the lighter sandy soils are subject to severe erosion, making them best suited for grain sorghum and sudan grass, when cultivated.

Nonirrigated Cotton Farms, High Plains, Tex.

In this report, data and descriptions for nonirrigated cotton farms are based largely on sample data representing farms having 100 to 1,200 acres of cropland. About 7 of every 8 nonirrigated cotton farms in the area were within this size range in 1964.

On the nonirrigated cotton farms, net farm incomes in 1967 averaged \$15,885--13 percent above 1966 (table 4). Gross farm incomes and operating expenses averaged 9 percent more than in 1966.

Farm production averaged 5 percent below 1966, because a larger proportion of the cotton crop was abandoned in 1967, and yields on harvested acreage were lower. Acreage of grain sorghum was increased almost 40 percent and production rose about 65 percent. Yields of cotton lint averaged 12 percent lower, but grain sorghum yields increased about 20 percent.

Total cash receipts averaged 10 percent above 1966, reflecting higher

Table 4.--Organization, production, costs and returns, nonirrigated cotton farms, High Plains, Tex., average 1957-59, annual 1966-67

Item	Unit	Average 1957-59	1966	1967 ^{1/}
Land in farm.....	Acre	425	599	623
Cropland harvested.....	do.	296	317	369
Crops harvested:				
Cotton.....	do.	135.3	135.0	123.0
Grain sorghum.....	do.	154.9	173.2	240.0
Forage.....	do.	5.9	8.5	6.0
Crop yields per harvested acre:				
Cotton.....	Pound	247	320	280
Grain sorghum.....	Cwt.	10.8	12.0	14.5
Forage.....	Ton	1.7	2.0	2.1
Livestock on farm, Jan. 1:				
All cattle.....	Number	5	5	6
All hogs.....	do.	3	3	4
Total farm capital, Jan. 1.....	Dollar	54,190	94,660	95,920
Land and buildings.....	do.	45,910	82,060	82,240
Machinery and equipment.....	do.	7,350	11,550	12,430
Livestock.....	do.	630	740	860
Crops.....	do.	300	310	390
Total labor used.....	Hour	4,430	3,740	3,590
Hired.....	do.	2,630	1,730	1,490
Total cash receipts.....	Dollar	14,316	23,373	25,750
Cotton, lint and seed.....	do.	11,073	10,142	9,046
Other crops.....	do.	2,434	3,526	5,817
Cattle.....	do.	168	157	236
Hogs.....	do.	121	247	284
Poultry and eggs.....	do.	182	68	54
Other, including Government payment...	do.	338	9,233	10,313
Value of perquisites.....	do.	630	662	678
Change in inventory of crops and livestock.....	do.	32	112	-18
Gross farm income.....	do.	14,978	24,147	26,410
Total cash expenditures.....	do.	7,890	10,387	11,102
Feed purchased.....	do.	153	106	117
Livestock expense.....	do.	46	35	35
Fertilizer.....	do.	11	65	58
Pesticides and other chemicals.....	do.	35	358	519
Other crop expense.....	do.	256	308	384
Ginning.....	do.	1,083	1,840	1,533
Machinery.....	do.	3,474	4,961	5,756
Machine work hired.....	do.	327	371	499
Farm buildings and fences.....	do.	167	213	218
Labor hired.....	do.	1,984	1,536	1,344
Taxes.....	do.	288	482	527
Other.....	do.	66	112	112
Inventory adjustment, machinery and buildings.....	do.	-371	-347	-577
Total operating expenses.....	do.	7,519	10,040	10,525
Net farm income.....	do.	7,459	14,107	15,885

^{1/} Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

cotton prices and increased Government payments for participation in the 1967 Upland Cotton Program. Prices paid for production inputs and total cash expenses averaged about 3 percent above 1966 levels.

Irrigated Cotton Farms, High Plains, Tex.

This analysis is based largely on a sample of irrigated cotton farms having between 100 and 1,000 acres of cropland each. About 90 percent of all irrigated farms in the area were within this size range in 1964.

On these irrigated cotton farms, 1967 net farm incomes averaged \$22,140--22 percent above 1966 (table 5). Gross farm incomes averaged 14 percent higher, and operating expenses increased an average of 6 percent.

Total cash receipts per farm averaged 16 percent higher than in 1966, reflecting greater returns from cotton (due to higher prices), grain sorghum (31 percent more acreage), and Government payments (largely reflecting higher price-support payment rates). Farm production averaged 3 percent more than in 1966, due to the large increase in grain sorghum production. The index of prices received for farm products rose 11 percent, due to cotton prices averaging about 20 percent more than in 1966. Prices for cottonseed averaged 13 percent lower, and grain sorghum prices averaged just below the 1966 level.

Irrigated cotton yields averaged 5 percent above 1966, but dryland cotton yields averaged 12 percent lower. Irrigated grain sorghum yields averaged 5 percent lower, but dryland grain sorghum yields were 21 percent above 1966.

The index of prices paid for production inputs averaged about 4 percent above 1966. Rates for hired labor averaged about 8 percent higher, and farm machinery purchase and operation, irrigation equipment and operation, seeds, and ginning were among other items with higher unit prices.

Total cash expenses on irrigated cotton farms increased 6 percent. Expenditures for ginning and for the purchase and operation of farm machinery and irrigation equipment accounted for about two-thirds of all expenses. Greater outlays were made for nearly all production inputs.

Cotton-General Crop Farms, San Joaquin Valley, Calif.

Texas and Mississippi are the only two States which produce more cotton than California. About 90 percent of all California cotton is grown in six counties in the southern portion of the San Joaquin Valley, which is in south central California. The counties are Fresno, Kern, Kings, Madera, Merced, and Tulare. The Valley is bounded on the east by the Sierra Nevada Mountains, which are the major source of its irrigation water. The average annual rainfall in the Valley ranges from about 20 inches in the north to less than 10 inches in the south. This rainfall comes almost entirely during the cool winter months and causes intensive agriculture to be highly dependent on summer irrigation. Water for irrigation is obtained from streams, reservoirs, irrigation canals, and irrigation wells. Practically all the land that has sufficient water available is cropped and irrigated. Nonirrigated farmland is devoted mainly to pasture or range and to small grains.

Table 5.--Organization, production, costs and returns, irrigated cotton farms, High Plains, Tex., average 1957-59, annual 1966-67

Item	Unit	Average 1957-59	1966	1967 ^{1/}
Land in farm.....	Acre	364	492	512
Cropland harvested.....	do.	300	285	325
Crops harvested:				
Cotton: nonirrigated.....	do.	24.9	29.5	27.0
irrigated.....	do.	108.6	99.2	93.0
Grain sorghum: nonirrigated.....	do.	105.0	93.0	126.0
irrigated.....	do.	57.4	60.9	78.0
Forage.....	do.	4.6	2.6	1.0
Crop yields per harvested acre:				
Cotton: nonirrigated.....	Pound	259	320	280
irrigated.....	do.	513	525	550
Grain sorghum: nonirrigated.....	Cwt.	12.4	12.0	14.5
irrigated.....	do.	29.5	40.0	38.0
Forage.....	Ton	2.4	2.5	2.2
Livestock on farm, Jan. 1:				
All cattle.....	Number	7	6	6
All hogs.....	do.	7	5	6
Total farm capital, Jan. 1.....	Dollar	102,540	154,790	159,770
Land and buildings.....	do.	86,560	134,810	138,750
Machinery and equipment.....	do.	14,520	18,740	19,560
Livestock.....	do.	940	850	960
Crops.....	do.	520	390	500
Total labor used.....	Hour	6,040	4,380	4,430
Hired.....	do.	3,710	1,980	1,930
Total cash receipts.....	Dollar	26,122	32,818	38,007
Cotton, lint and seed.....	do.	20,639	14,399	15,391
Other crops.....	do.	4,284	5,891	7,910
Cattle.....	do.	329	191	268
Hogs.....	do.	423	296	398
Poultry and eggs.....	do.	169	33	26
Other, including Government payments..	do.	278	12,008	14,014
Value of perquisites.....	do.	891	870	890
Change in inventory of crops and livestock.....	do.	-95	127	-91
Gross farm income.....	do.	26,918	33,815	38,806
Total cash expenditures.....	do.	14,539	16,105	17,150
Feed purchased.....	do.	176	98	111
Livestock expense.....	do.	51	39	39
Fertilizer.....	do.	519	801	860
Pesticides and other chemicals.....	do.	163	614	674
Irrigation expense.....	do.	2,112	2,185	2,224
Irrigation facilities.....	do.	581	620	650
Other crop expense.....	do.	398	392	481
Ginning.....	do.	2,022	2,621	2,613
Machinery.....	do.	4,393	5,250	5,793
Machine work hired.....	do.	521	560	679
Farm buildings and fences.....	do.	211	263	274
Labor hired.....	do.	2,896	1,819	1,847
Taxes.....	do.	398	681	743
Other.....	do.	98	162	162
Inventory adjustment, machinery and buildings.....	do.	-593	-420	-484
Total operating expenses.....	do.	13,946	15,685	16,666
Net farm income.....	do.	12,972	18,130	22,140

^{1/} Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

Agriculture is highly diversified in the Valley, although quite specialized in local areas. The percentage distributions of commercial farms by types for 1959 and 1964 are shown in table 2. In 1964, cotton-type farms accounted for 18 percent of all commercial farms in the Valley. Fruit and nut farms were most numerous, accounting for 45 percent of all commercial farms. However, field crops, mainly cotton, alfalfa, grain, beans, potatoes, and sugarbeets, occupied most of the cropland.

Based on data for these counties from the 1964 Census of Agriculture, 36 percent of all commercial farms produced cotton on 23 percent of all cropland acreage harvested. Cropland acreage harvested on all commercial farms constituted 31 percent of total land. More than six-tenths of the commercial cotton acreage harvested and cotton produced was on cotton-type farms. In this report, data and descriptions that follow are based largely on sample data representing cotton farms that harvest field crops on 200 to 600 acres of land. About 22 percent of all commercial cotton farms were within this size range in 1964.

Net farm incomes on these medium-sized cotton farms in the San Joaquin Valley averaged \$31,400 and were 24 percent higher than in 1966 (table 6). Although net farm production averaged 7 percent lower and total expenditures 3 percent higher in 1967, net farm incomes increased an average of 24 percent. This was due to larger acreages of alfalfa, barley, and corn, higher

prices received for cotton and alfalfa, and higher payments for participation in the Upland Cotton Program.

Cotton acreages were reduced on many farms due mainly to increased diversions for payment. Cotton yields averaged about 11 percent below 1966 due to the unfavorable growing season, which resulted in a late-developing crop and heavy damage from insects.

The index of all crop yields for these farms averaged 9 percent lower in 1967. Barley yields were higher on balance, but yields for other crops were generally lower.

For all products sold, the index of prices received in 1967 was 14 percent above 1966, reflecting largely the higher prices received for cotton and alfalfa. The index of prices paid in 1967 was 3 percent higher than a year earlier. Unit costs of most production items were higher, but the increases in wage rates were less pronounced, compared with the High Plains and the Delta. California farmers had been paying wages higher than the minimum wage level of \$1 per hour, which became effective February 1, 1967.

Total cash expenses averaged 3 percent above 1966, with total outlays increasing for practically all items. Expenditures for the purchase, maintenance, and the operation of farm machinery, for labor, and for irrigation equipment and water accounted for two-thirds of all expenses on these farms.

Table 6.--Organization, production, costs and returns, cotton-general crop farms,
San Joaquin Valley, Calif., average 1957-59, annual 1966-67

Item	Unit	Average 1957-59	1966	1967 <u>1</u> /
Land in farm.....	Acre	329	367	372
Cropland harvested.....	do.	312	314	338
Crops harvested:				
Cotton.....	do.	133	111	108
Alfalfa hay.....	do.	116	119	127
Barley.....	do.	45	38	52
Corn.....	do.	18	46	51
Crop yields per harvested acre:				
Cotton.....	Pound	1,040	930	825
Alfalfa hay.....	Ton	5.0	5.7	5.4
Barley.....	Bushel	50.8	53.7	56.1
Corn.....	do.	57.0	77.1	70.4
Total farm capital, Jan. 1.....	Dollar	254,920	337,380	344,300
Land and buildings.....	do.	212,030	283,820	287,780
Irrigation system.....	do.	18,490	21,660	22,870
Machinery and equipment.....	do.	24,400	31,900	33,650
Total labor used.....	Hour	9,880	8,540	8,600
Hired.....	do.	7,280	5,940	6,000
Total cash receipts.....	Dollar	67,867	72,826	80,356
Cotton, lint and seed.....	do.	50,067	34,197	36,197
Alfalfa hay.....	do.	14,056	19,296	21,383
Barley.....	do.	2,334	2,490	3,355
Corn.....	do.	1,410	5,356	4,703
Other, including Government payment...	do.	0	11,487	14,718
Value of perquisites.....	do.	688	705	721
Gross farm income.....	do.	68,555	73,531	81,077
Total cash expenditures.....	do.	41,117	48,574	49,863
Fertilizer.....	do.	2,745	3,279	3,365
Pesticides and other chemicals.....	do.	1,971	2,818	2,880
Other crop expense.....	do.	910	1,006	1,137
Operating cost of machinery.....	do.	5,192	5,860	6,167
Machinery.....	do.	4,956	5,857	6,061
Machine work hired.....	do.	2,402	4,876	5,109
Ginning.....	do.	4,553	4,170	3,698
Farm buildings.....	do.	214	221	225
Labor hired.....	do.	6,951	6,802	7,037
Irrigation facilities.....	do.	1,837	2,057	2,173
Irrigation water.....	do.	5,061	5,984	6,248
Taxes.....	do.	3,059	4,049	4,132
Workmen's compensation.....	do.	441	665	716
Other.....	do.	825	930	915
Inventory adjustment, machinery and buildings.....	do.	-79	-286	-175
Total operating expenses.....	do.	41,038	48,288	49,688
Net farm income.....	do.	27,517	25,243	31,389

1/ Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

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